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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/813,839	03/22/2001	Richard David Neufeld		3128

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EXAMINER
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TAMAI, KARL I

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 01/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/813,839

Applicant(s)

NEUFELD ET AL.

Examiner

Tamai IE Karl

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 and 14-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14, 15, 16/14, 22, 23/16/14 is/are allowed.
- 6) ☒ Claim(s) 1-11, 16-21 and 23-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.                      6) ☐ Other: \_\_\_\_\_

***Election/Restrictions***

1. The Applicant's election of Group I, claims 1-8, and 14-23, without traverse is acknowledged. Claims 9-13 are withdrawn from consideration.

***Specification***

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Drawings***

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the must be shown or the features canceled from the claims. No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 1-3, 5, 7, 16/1-3, 16/5, 16/7, 17, 18, 23/16/1-3, 23/16/5, 23/16/7, 24, and 25 are rejected under 35 U.S.C. 102(b) as being anticipation by Strain (US 5,729,075). Strain teaches a resonant MEMS device where the forced resonance frequency of the plunger is manipulated. The plunger being maintained at the resonant frequency, which is the maximum displacement and a constant gradient. It is inherent that the factional actuation signal includes a portion of the snap down region of the actuator.

6. Claim 1-5, 7, 8, 16/1-5, 16/7, 16/8, 17-20, 23/16/1-5, 23/16/7, 23/16/8, and 24-26 are rejected under 35 U.S.C. 102(b) as being anticipation by Snelling (US 4,835,461). Snelling teaches an actuator which is manipulated by being driven at the force frequency which is the natural frequency cantilevered beam. Snelling teaches the displacement sensor (45,45') of the plunger being the only feedback signal. The plunger being maintained at the resonant frequency, which is the maximum displacement and a constant gradient. Snelling teaches the oscillator 63 being independently and concurrently controlled from the displacement of the plunger. It is inherent that the factional actuation signal includes a portion of the snap down region of the actuator.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 6, 9-11, 16/6, 16/9-11, 21, 23/16/6, and 23/16/9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Snelling (US 4,835,461) in further view of deBoer et al. (US 6,446,486). Snelling teaches every aspect of the invention except the use of a software algorithm. DeBoer teaches the use of a computer (inherently includes a software algorithm). It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the actuator of Snelling with the actuator controlled by a computer because deBoer teaches the equivalence of the actuator controlled with or without a computer, and because a computer provides simplified control of MEM devices.

***Allowable Subject Matter***

9. Claims 14, 15, 16/14, 22, 23/16/14 are allowed.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl I.E. Tamai whose telephone number is (703) 305-7066. The examiner can be normally contacted on Monday through Friday from 8:00 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Nestor Ramirez, can be reached at (703) 308-1371. The facsimile number for the Group is (703) 305-3432. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Karl I Tamai  
PRIMARY PATENT EXAMINER  
January 22, 2003

KARL TAMAI  
PRIMARL TAMAI  
PRIMARY EXAMINER  
